

**IN THE UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF TEXAS
WACO DIVISION**

COMMWORKS SOLUTIONS, LLC

Plaintiff,

v.

COMCAST CABLE COMMUNICATIONS,
LLC and COMCAST CABLE
COMMUNICATIONS MANAGEMENT,
LLC,

Defendants.

Civil Action No.: 6:21-cv-00366-ADA

DECLARATION OF MARK LANNING

I, Mark Lanning, declare as follows:

1. I make this declaration based upon my own personal knowledge and, if called upon to testify, would testify competently to the matters stated herein.
2. This declaration is a statement of certain opinions that I have developed regarding the meaning of certain claim terms and phrases in U.S. Patent No. 7,177,285 (the “285 Patent”).
3. My compensation is at my normal rate of \$550/hour and is not based on the content of my opinions or the resolution of this matter.

Credentials and Background

4. In formulating my opinions, I have relied on my knowledge, training, and experience in the relevant field, which I will summarize briefly.
5. I have attached as **Exhibit 1** to this declaration a current copy of my *curriculum vitae*, which I incorporate here by reference.

6. I am currently the president of two active consulting companies: Telecom Architects, Inc. and Reticle Consulting, LLC. Each of these companies provides professional consulting services and custom software development for one or more particular technical areas. Telecom Architects was established in 1999 to provide specialized consulting services to fixed and wireless telecom service providers and their equipment suppliers. Reticle Consulting was created in 2009 to provide specialized consulting services for forensic software analysis and software source code comparison for software misappropriation cases.

7. I have over 40 years of experience in a wide variety of communication technologies, including cellular networks and their components (*e.g.*, base stations, mobile switching centers, and handsets), and advanced cellular network-based services (*e.g.*, Short Message Service (“SMS”), Enhanced Message Service (“EMS”), Multimedia Message Service (“MMS”), Public Switched Telephone Network (“PSTN”) networks, advanced subscriber services that use Intelligent Networking (“IN”) network components, and various signaling protocols (*e.g.*, Signaling System 7 (“SS7”) and Integrated Services Digital Networks (“ISDN”)).

8. Beginning in 1983, I was initially a software development engineer, later a development manager and ultimately was the director of software development at Digital Switch Corporation working on telephone switching systems that were capable of connecting over 200,000 calls per hour. These were distributed processing systems that included hundreds of processors that were connected together to perform all the necessary functions of a switching system: connecting calls; creating billing records; providing user interfaces; and playing announcements. I was responsible for developing multiple layers of X.25 communication protocols and a file transfer protocol used on DSC’s switches. I later worked on the team responsible for converting DSC’s PSTN telephone switch into a Mobile Switching Center

(“MSC”) for Motorola to sell as a part of their cellular product offering in the U.S. and many other countries.

9. In 1987, I joined the Telecom Division of Tandem Computers, Inc. (now part of HP) as their Vice President of hardware and software development. Tandem Telecom was a new division that built products for telephone companies that leveraged its fault tolerant Guardian and Unix based computer systems. In order to support the different types of systems that would be using the Tandem fault tolerant and distributed processing platforms, we developed a software platform layer that provided all the various functions the different systems would need while providing an abstraction layer to support the many different protocols that were required to communicate with the many diverse legacy systems. These systems used state of the art hardware and software to perform standard functions and were capable of supporting hundreds of globally located nodes with multiple processors in each node. The software was written for these systems in C, C++ and assembly language.

10. In 1991, I started my own consulting company and one of my first projects was as a consultant to Motorola for its “SuperCell” base station product, and as a consultant to British Telecom on its current analog cellular network and its planned Global System for Mobile Communications (“GSM”) network. My work as a consultant evolved over the years into many different cellular network and equipment design and implementation projects.

11. Later in 1991, I began working as the architect and development manager for two other large system development projects with a budget in excess of \$100 million each. These projects were for British Telecom’s cellular network division called Cellnet. The initial project, ACN, was an on-line transaction processing (OLTP) system responsible for real-time dialed digit translation for every phone call in the Cellnet network and was required to perform thousands of

transactions per second. The second project replaced Cellnet's batch-oriented billing system with a distributed real-time call detail record collection and on-demand rating and billing system with user interfaces at many point of sale (POS) locations for real-time rating and billing that was used for providing a bill to customers when they returned their rental car that included a cellular phone. Both of these systems were 24x7 mission critical and were required for completing wireless calls and billing functions to the network.

12. Since 1995, I have also provided second generation (2G) and third generation (3G) Code Division Multiple Access ("CDMA") network architecture, equipment design, and implementation consulting services to companies such as Sprint, Nextel, and Nokia. This experience included working with multiple cellular phone suppliers to define the functionality and implementation for cellular phones with a wide range of features. These cellular phones ranged from basic models that had only small alphanumeric displays and keypads to advanced smartphone models that included touch-sensitive display screens and many features and applications found in laptop computers.

13. I also have extensive consulting experience in the functionality, design, and configuration of both wired and wireless LANs for my clients, my own personal networks and as an expert.

14. I received a B.S. in Computer Science from Southern Methodist University in 1983. I have been a visiting lecturer at SMU on various data and voice telecommunications subjects. I am a member of the Institute of Electrical and Electronics Engineers (IEEE), including the IEEE Standards Association. I am also a member of the Association for Computing Machinery (ACM).

15. I have testified as an expert in many cases involving wireless communications and storage technologies, as listed in my *curriculum vitae* (attached), which also includes information regarding my other qualifications.

16. I have reviewed the '285 Patent and relevant portions of the prosecution file history. I am familiar with the subject matter of these patents, which is well within the scope of my education and professional experience. Based on at least my background, including over forty years of experience with many communication technologies, I am familiar with the issues and technology relating to wireless communications and mobile telecommunication networks.

17. The '285 Patent claims priority to an application filed in 2003. I have a personal understanding of the level of skill and knowledge of a person of ordinary skill in the art regarding the '285 Patent as of 2003 and how such a person would understand the terminology used in the '285 Patent. I have applied that understanding in my analysis of the claims of the '285 Patent that I address in this declaration.

My Understanding of the Legal Principles Underlying Claim Construction

18. I understand that patent claims in federal district court proceedings are interpreted by applying a claim construction standard which I understand is referred to as the *Phillips* standard.

19. I understand that under the *Phillips* standard, claim terms are typically given their ordinary and customary meaning as would have been understood by a person of ordinary skill in the art at the time of the invention based on the language of the claims, the patent specification, and the prosecution history. I further understand that these sources of evidence are often referred to as “intrinsic evidence” or the “intrinsic record” of the patent.

20. I additionally understand that under the *Phillips* standard, extrinsic evidence such as expert or inventor testimony, dictionary definitions, and prior art publications can also be considered but are given less weight than the intrinsic evidence.

21. I have been asked to provide my opinion regarding the meaning of the following terms to a person of ordinary skill in the art at the time of the '285 Patent based on the standard that articulated above.

Legal Standards

22. I am not an attorney and do not have formal legal training. Counsel has informed me about the relevant legal standards with regard to claim construction.

23. I understand that the goal of claim construction is for a court to give each term its plain and ordinary meaning – i.e., the meaning to a person of ordinary skill in the art (“POSITA”) at the time of the invention.

24. I further understand that to ascertain the plain and ordinary meaning, courts can consider so-called “intrinsic evidence” – i.e., the claim language, the specification, and the prosecution file history. I further understand that courts can consider so-called “extrinsic evidence” (e.g., prior art, dictionaries, or treatises from the time of the claimed invention, or expert testimony) to understand the field of the invention and aid in the determination of a POSITA’s understanding of the claim terms.

25. I further understand that a patent applicant can define claim terms in the patent specifications.

26. I understand that some claims, typically drafted as a means or step for performing a specific function, that do not recite a structure, material or act in support of performing the specified function shall be construed as a means-plus-function claim. I further understand that,

for means-plus-function claims that involve a computer-implemented function, the corresponding structure is the algorithm disclosed in the specification for performing that computer-implemented function. I further understand that an algorithm can be a fixed step-by-step process for accomplishing a given result.

27. I understand that if the patent specification fails to disclose an algorithm for performing a computer-implemented function, then the claim is indefinite and invalid. I further understand that, while the sufficiency of an algorithm is evaluated from the perspective of a POSITA, a POSITA cannot substitute his knowledge in the absence of any algorithm being disclosed in the specification.

Claim Constructions of Terms in the '285 Patent

28. In my opinion, a person of ordinary skill in the art for the '285 Patent would have a B.S. in Computer Science or an equivalent degree from a technical vocational school, with 1-2 years of experience working with wireless computer networks. In considering the qualifications of the person of ordinary skill, I have considered the subject matter of the '285 Patent, the types of problems encountered in the art, the prior art solutions to those problems, the rapidity with which innovations are made in the art, the sophistication of the technology at issue and claimed in the patent, and the educational level of active workers in the field.

(a) **“[logic for] initiating [provisioning/an association] of the wireless device if the tracked operating parameter occurs within a time interval” (claims 1, 22, 43)**

29. I understand the parties agree to construe this phrase as a means-plus-function term, further agree on the claimed function, but disagree as to whether the '285 patent discloses an algorithm for performing the claimed function.

30. In my opinion, I agree with the parties that the claimed function for claims 1 and 22 is “initiating provisioning of the wireless device if the tracked operating parameter occurs

within a time interval, and the claimed function for claim 43 is “initiating an association of the wireless device if the tracked operating parameter occurs within a time interval.” My opinion is that these claimed functions are computer-implemented functions because the claims describe provisioning between a wireless device and a network. *See* ’285 Patent, at cls. 1, 22, and 43. Thus, it is my understanding that the corresponding structure for performing these claimed functions must be an algorithm disclosed in the specification.

31. In my opinion, based on my review of the patent claims, specifications, and file history, the ’285 Patent does not disclose an algorithm for performing the claimed functions of “initiating [provisioning/an association] of the wireless device if the tracked operating parameter occurs within a time interval.” As a result, it is my opinion that claims, 1, 22, and 43 are indefinite and are invalid.

32. My opinion is supported by the specifications. For example, Figures 3 and 4, both of which are described as a “flow chart of time based wireless access provisioning process,” mention “initiate provisioning 64,” but there is no additional information disclosed about how to perform that function. ’285 Patent, at 4:17-20. I have reproduced Figures 3 and 4 below and circled the “initiate provisioning” step in red.

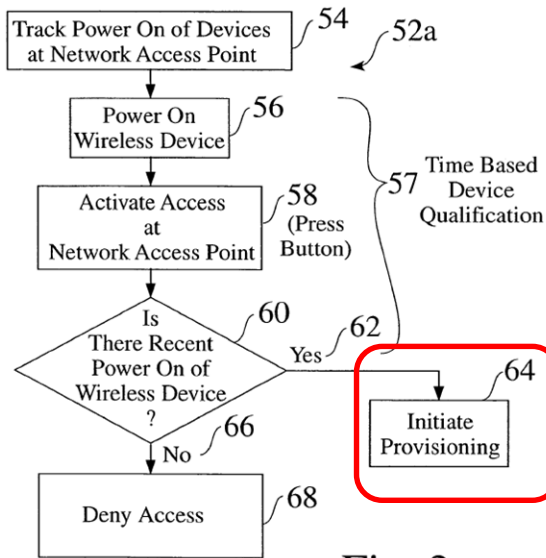


Fig. 3

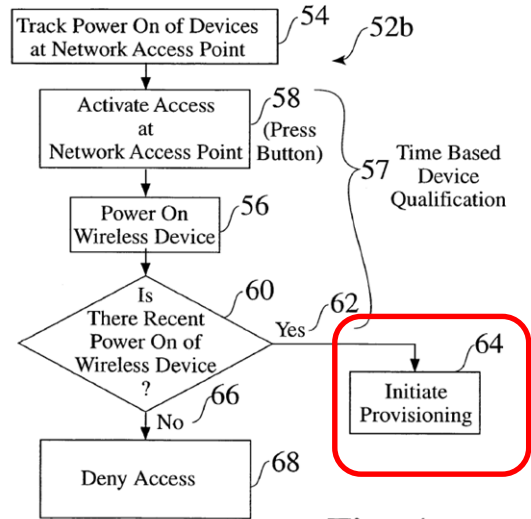


Fig. 4

33. Figures 3 and 4 do not inform a POSITA about what steps are needed to initiate provisioning under claims 1 and 22 or what steps are needed to initiate an association under claim 43. The figures do not contain any descriptions about how these functions are performed. In addition, the portion of the specifications describing these two figures also does not describe any step-by-step process for initiating provisioning or initiating an association between the wireless device and the network. Instead, the specification just states that the “positive determination logic 62 allows the network access point 12 to initiate provisioning.” ’285 Patent, at 5:52-54 & 6:41-43.

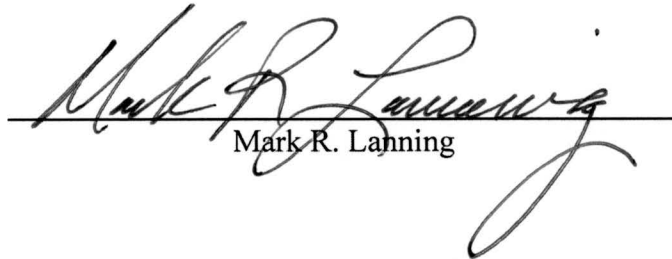
34. The other steps in Figures 3 and 4 relate to tracking an operating parameter of a wireless device, activation, and time based device qualification (57). ’285 Patent, at 5:27-45. All of these steps are used to determine whether a wireless device should be provisioned with a network, and thus, must occur before provisioning is initiated.

35. As another example, I understand Commworks cites to Figure 1 and the corresponding passage at 4:32-44 as disclosing an algorithm. Figure 1 is a “schematic plan view

10 of a time based wireless access provisioning system” and the passage at 4:32-44 explains the various components such as a network access point that are found in Figure 2, which is a “functional block diagram of a time based wireless access provisioning system 20.” These citations do not contain an algorithm for initiating provisioning or association of a wireless device if the tracked operating parameter occurs within a time interval.

36. I also reserve the right to respond to any expert testimony that Commworks may provide with their claim construction brief.

I declare under the penalty of perjury that the above is true and accurate to the best of my knowledge. Executed in Greenville, Tx on Oct. 15, 2021.


Mark R. Lanning

Curriculum Vitae

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Mark R. Lanning

Mark is currently the President of Telecom Architects, Inc., I.N. Solutions, Inc.¹ and Reticle Consulting, LLC. Each of these companies provides professional consulting services and custom software development for one or more particular technical areas. I.N. Solutions (Intelligent Networking Solutions) was established in 1991 with an emphasis on applications design and network architecture engineering for telephone-based switching and Advanced Intelligent Networking systems. Telecom Architects was established in 1999 to provide specialized consulting services to fixed and wireless telecom service providers and their equipment suppliers. Reticle Consulting was created in 2009 to provide specialized consulting services for forensic software analysis and software source code comparison for software misappropriation cases.

Mark has over 35 years of engineering experience in all the development life cycle phases for hardware and software products. He has worked with both network operators and product suppliers regarding network architectures and product development and has acquired key insights into their perspectives and requirements as both suppliers and customers.

While working for three different product suppliers, Mark was directly responsible for the design, development and rollout of new products that have earned combined revenues in excess of one billion dollars for their respective companies. These products include: the DSC/Alcatel Signal Transfer Point (STP) product; the Teling/ADC M13 transmission multiplexer and analyzer products; and the Tandem/HP Service Control Point (SCP), Service Management System (SMS); Service Creation Environment (SCE) products and their applications.

Since starting I.N. Solutions in 1991, Mark has worked with Motorola, Sprint, Nextel, and British Telecom (BT) to roll out some of the most successful telecom applications and network expansions worldwide. Mark was directly involved in the design of Sprint's Common Channel Signaling System 7 (SS7) network and the design and rollout of its FON (calling card) and 800 number services. Mark was the program manager responsible for the design and rollout of BT's Advanced Cellular Network (ACN) that used AIN functionality. BT's ACN was one of the largest cellular networks in the world and also includes advanced corporate virtual private network (VPN) and pre-pay validation services. Starting in 1998, Mark and the Telecom Architects (TAI) team were contracted by Nextel to design their 2.5G cellular iDEN switching, VoIP dispatch network² and its TDM/SONET transmission networks. After completion of the 2.5G network design, Mark and the TAI team performed a large part of the qualification, testing and rollout phases for new equipment suppliers and their applicable products into Nextel's network.

Before starting his own consulting company in 1991, Mark was initially employed as individual contributor on both hardware and software development projects, later worked as a manager on hardware and software development groups that varying in size from 5-20 engineers and eventually held several executive management positions with responsibility of over 200 engineers.

Hardware and Software Development Experience

Mark's hardware and software experience began in 1974 while in the US Army Signal Corps. Mark was initially trained as a hardware technician on data and voice crypto (encrypted transmission) communications equipment. After achieving the "top graduate" award at three different hardware and

¹ I.N. Solutions Inc. is no longer active.

² Also referred to as the Nextel push-to-talk or walkie-talkie feature that did not require a voice bearer channel.

software training schools, Mark received a Top Secret security clearance and was transferred to the Army Security Agency (ASA). His assignment with the ASA included joint software development with the National Security Agency (NSA) and the white house communications staff. The software development was done on “state of the art” computer and communication systems built by DEC and GE using assembly language.

From 1978-1983, Mark worked as both a hardware and software development engineer for IT&T Defense Communications. The majority of his time was spent on building a new store and forward message switching system that was used by the white house, US embassies worldwide and two major US airlines. DEC PDP-11 and PDP-15 computers were coupled together and operated in conjunction with custom IT&T hardware for this system. The system architecture was traditional mini-computer architecture with sixteen front-end communications computers to interface with hundreds of modems and perform various communications protocols. The software was written in DEC assembly language. Many different types of communications protocols and state of the art modems were used with this system.

In 1983, Mark was hired as hardware and software development engineer by Digital Switch Corporation (now a part of Alcatel) and was later promoted to design and development manager responsible for their initial SS7 protocol and Signal Transfer Point (STP) products. The STP product performed packet switching for thousands of messages per second between telephone switches for the purpose of connecting normal phone calls worldwide and support of advanced telephony services. The STP was designed to have a fault tolerant hardware and software architecture to provide 24x7 operation and provided interfaces to various telephone company management and support systems. A typical configuration of the STP product included at least 200 separate microprocessor boards working in a closely coupled distributed system architecture. Communications between the processors was performed over parallel hardware buses using DSC’s proprietary operating system. Mark was also responsible for development of all the communication protocols the STP would require to communicate with other switching, operations and administration systems. These protocols were X.25, X.75, SS7 MTP/SCCP/TCAP and FTP. The hardware used was Zilog Z-8000 and Motorola 68xxx family microprocessors. The software was written in assembly and C languages.

In 1985, Mark was hired by Teling Inc. (now part of ADC) as their director of software development and was later promoted to vice president of hardware and software development. Teling was a venture capital start-up company and their initial two products were high speed digital TDM transmission multiplexers and analyzers mainly used by telecom network operators and service providers. The hardware consisted of multiple Motorola 68xxx family processors replicated different types of custom designed high-speed gate arrays. The software was distributed and written in C and assembly language.

In 1987, Mark joined the Telecom Division of Tandem Computers, Inc. (now part of HP) as their Vice President of hardware and software development. Tandem Telecom was a new division that built products for telephone companies that leveraged its fault tolerant Guardian and Unix based computer systems. The initial products built under Mark’s direction were a Service Control Point (SCP), Service Management System (SMS) and Service Creation Environment (SCE). Although these product names are unique to Intelligent Networking telephony systems, they use state of the art hardware and software to perform many standard functions. The SCP system performs on-line transaction processing for the telephone switches in a network. These transactions support phone company services like 800 number translation, calling card number validation and home location register (HLR) functionality for cellular networks. The SCP was a fault tolerant multiple processor system capable of supporting hundreds of globally located nodes with multiple processors in each node. Each SCP required specialized

communications software and hardware that was build by Tandem Telecom. The full suite of commercial communications software was supported including X.25, TCP/IP and SS7. The software was written in C, C++ and assembly language. The SMS system was build to manage multiple SCP systems, update the software applications and keep their multi-million record databases synchronized. The SMS software was written in C and C++. The SCE was telephone service authoring tool used by telephone company personnel to modify or create new services on their network without requiring them to be intimately familiar with the underlying system or detailed programming. The SCE software ran on Unix or PC Windows operating systems and was written in C++ and C and the most advanced software development workbench software.

Program and Project Management Experience

Mark has been directly involved with formal project management concepts and tools since 1984. Most, if not all, the projects listed above were managed using project management concepts and tools. The main techniques used for these projects were PERT and CPM. Mark either generated the initial PERT chart and staff assignments for each project or was directly involved in defining the program logic and assignments to be used. Since 1984, every project that Mark has been responsible for has included formal product life cycle documentation, requirements tracking, problem reporting and resolution.

Since 1991, Mark has been responsible for some large development and network architecture projects with a budget in excess of \$100 million each. Two of these projects were for British Telecom's cellular network division called Cellnet. The initial project, ACN, was an on-line transaction processing (OLTP) system responsible for real-time dialed digit translation for every phone call in the Cellnet network and was required to perform thousands of transactions per second. The second project replaced Cellnet's batch-oriented billing system with a distributed real-time call detail record collection and on-demand rating and billing system. Both of these systems required custom development for a majority of the software that was done by different companies located across multiple countries and continents. The ACN project lasted about four years and involved over 100 software development personnel located in Texas, Nebraska, California, Sweden, Spain, Finland and England. The billing system project lasted more than three years and required over 600 developers at its peak that were located in England, Colorado, Texas and Sweden. Both of these systems were 24x7 mission critical to completing wireless calls and billing.

Mark and members of the Telecom Architects group have developed innovative methods for requirements definition, design, modeling and documentation of large telecommunications networks. Some of this methodology has been published by Wireless Review Magazine.

In 1977 and 1978 Mark obtained a Private Pilot, Commercial, Instrument, and Flight Instructor ratings.

Mark received a BS in Computer Science degree from Southern Methodist University in 1983 and has been a visiting lecturer at SMU on various data and voice telecommunications subjects.

Industry Memberships

Member of IEEE and IEEE Standards Association.

Member of ACM (Association for Computing Machinery).

Telecom Standards Definition

Mark is one of the Advanced Intelligent Network (AIN) and Signaling System Number 7 (SS7) pioneers. He was a contributing member of the first ANSI T1X1 standards group that defined and approved the initial North American AIN and SS7 requirements and was actively involved with this group for three years. These standards were later adopted by the ITU.

Telephony Systems

Mark has been directly involved with the development and/or detailed functional analysis of the following systems: DSC/Alcatel DEX-STP, DEX-400, DEX-600 and MegaHub circuit switches; Nortel DMS circuit switch for class IV and MSC applications; Ericsson AXE circuit switch for class IV, MSC and HLR applications; Lucent's 5ESS circuit switch in class IV, class V and MSC applications; Tandem/HP SCP, SMS, SCE and HLR.

Mark has also been intimately involved with the design, analysis and/or network implementation of many different PSTN and cellular network elements including at least: MSC, VLR, HLR, BSC, BTS, SMSC, MMSC, GGSN/SGSN, eNodeB, and RNC.

Network Design Experience Summary

Mark has extensive telecommunications network design experience for both North American and European fixed and wireless networks. He has participated in the creation of RFIs and RFPs and the evaluation of supplier responses; negotiated supplier equipment contracts; written requirements for custom hardware and software features and has led engineering teams in the design and rollout of new networks and network expansions. These network designs included LANs, WLANs, WANs, TDM and SONET transmission networks, signaling system 7 (SS7) networks, ATM/IP data switching/routing, mission critical on-line transaction processing enterprise networks and voice switching networks using traditional circuit switches, soft switches and media gateways.

Software Development Languages and Tools

Assembly language for DEC PDP-11, PDP-15, Zilog Z-80 & Z-8000, and Motorola 68xxx processors.

Fortran IV and Fortran 77.

Cobol.

Pascal.

Basic and Visual Basic

C and C++

X Windows, Motif and SmallTalk Toolkits

Microsoft Office FrontPage

Java and JavaScript

Publications

Mark Lanning and David Sanders, "In Sync" Wireless Review. January 15, 2000.

Technical Expert Experience for Cases Filed Since 2016.01.01

Huawei Technologies Co. Ltd. v. T-Mobile USA Inc., Nokia Solutions and Networks, et al. C.A. Nos. 2:16-cv-00052 and 2:16-cv-00056. Before the United States District Court for the Eastern District of Texas, Marshall Division. On behalf of Nokia & Cisco. Provided deposition testimony.

Nokia Solutions and Networks US LLC, et al. v. Huawei Technologies Co. LTD., et al. C.A. Nos. 2:16-CV-00753, 754, 755 and 756. Before the United States District Court for the Eastern District of Texas, Marshall Division. On behalf of Nokia.

Sycamore IP Holdings LLC v. AT&T Inc. et al. C.A. No. 2:16-cv-00588. Before the United States District Court for the Eastern District of Texas, Marshall Division. On behalf of AT&T. Provided deposition testimony.

Apple Inc. v. Qualcomm Inc. C.A. No. 3:17-cv-00108. Before the United States District Court for the Southern District of California in San Diego. On behalf of Apple.

Koninklijke KPN NV. v. TCL Corporation et al. C.A. No. 1:17-cv-00091. Before the United States District Court for the District of Delaware. On behalf of TCL.

Blackberry Limited, et al. v. Avaya Inc. C.A. No. 3:16-cv-2185. Before the United States District Court for the Northern District of Texas in Dallas. On behalf of Avaya.

Plectrum LLC v. AT&T Mobility LLC. C.A. No. 4:17-cv-120. Before the United States District Court for the Eastern District of Texas in Sherman. On behalf of AT&T.

Securus Technologies Inc. v. Global Tel*Link Corporation. C.A. No. 3:16-cv-01338. Before the United States District Court for the Northern District of Texas in Dallas. On behalf of Securus.

Intellectual Ventures I, LLC and Intellectual Ventures II, LLC v. Ericsson. C.A. No. 1:14-cv-01233-LPS. Before the United States District Court for the District of Delaware. On behalf of Ericsson.

Iridescent Networks, Inc. v. AT&T Mobility LLC and Ericsson Inc., C.A. No. 6:16-cv-1003-RWS-JDL. Before the United States District Court for the Eastern District of Texas in Tyler. On behalf of AT&T. No worked performed as of 09/15/2020.

Network Managing Solutions, LLC v. AT&T Mobility, LLC. C.A. No. 1:16-cv-00295-RGA (Filed April 2016). Before the United States District Court for the District of Delaware. On behalf of AT&T Mobility. No worked performed as of 09/15/2020.

Barkan Wireless IP Holdings, L.P. v. Samsung and Verizon. C.A. No. 2:18-cv-28-JRG. Before the United States District Court for the Eastern District of Texas, Marshall Division. On behalf of Samsung and Verizon.

Genband U.S. LLC and Sonus Networks, Inc. v. Metaswitch Networks Ltd and Countersuit. Cause No. DC-17-03697. Before the District Court of Dallas County, Texas, 134th Judicial District. Case regarding Internet and switching devices. On behalf of Genband.

Maxell, Ltd. v. Huawei Technologies Co. Ltd. et al. C.A. No. 5:16-cv-00178-RWS (Filed Nov. 2016). Before the United States District Court for the Eastern District of Texas, Texarkana Division. On behalf of Huawei. Inter Partes Review of U.S. Pat. Nos. 6,973,334, 6,983,140, and 7,324,487.

Zest Labs Inc et al v. Wal-Mart Inc. C.A. No. 4:18-cv-00500-JM (Filed Aug. 2018). Before the United States District Court for the Eastern District of Arkansas, Little Rock Division. On behalf of Zest. Case active as of 02/01/2021.

Zomm, LLC v. Apple Inc. C.A. No. 4:18-cv-04969-HSG (Filed Apr. 2018). Before the Before the United States District Court for the Northern District of California, Oakland Division. On behalf of Apple. Inter Partes Review of U.S. Pat. No. 8,351,895. Multiple depositions.

Sol IP, LLC, v. AT&T Mobility LLC. C.A. No. 2:18-cv-526-RWS-RSP (Filed 2018). Before the United States District Court for the Eastern District of Texas, Marshall Division. On behalf of AT&T. Case active as of 02/01/2021.

Packet Intelligence LLC v Nokia Solutions and Networks U.S. LLC. C.A. No. 2:18-cv-00382-JRG (Filed Aug. 2018). Before the United States District Court for the Eastern District of Texas, Marshall Division. On behalf of Nokia.

Carucel Investments L.P. v. General Motors Company, et. al. C.A. No. 3:18-cv-03332 (Filed Dec. 2018). Before the Before the United States District Court for the Northern District of Texas, Dallas Division. On behalf of Carucel. Case active as of 02/01/2021.

Rembrandt Wireless Technologies, L.P. v Apple Inc. C.A. 2:19-cv-00025-JRG (Filed Jan. 2019). Before the United States District Court for the Eastern District of Texas, Marshall Division. On behalf of Apple. Inter Partes Review of U.S. Pat. Nos. 8,023,580 and 8,457,228.

Optis Wireless Technology, LLC, Unwired Planet, LLC, and Panoptis Patent Management, LLC v Apple Inc. C.A. No. 2:19-cv-66. (Filed Feb. 2019). Before the United States District Court for the Eastern District of Texas, Marshall Division. On behalf of Apple.

Cellular Evolution LLC v. T-Mobile US, Inc. et al., C.A. 2:19-cv-232-JRG (Filed Jun. 2019). Before the United States District Court for the Eastern District of Texas, Marshall Division. On behalf of T-Mobile.

DataQuill Limited v. TCL Communication Technology Holdings Limited et al., C.A. 2:19-cv-03394-AB-PLA (Filed Apr. 2019). Before the United States District Court for the Central District of California, Los Angeles Division. On behalf of TCL.

Huawei Technologies Co. Ltd. v Verizon Communications, Inc., et. al., C.A. 2:20-cv-00030 (Filed Feb. 2020). Before the United States District Court for the Eastern District of Texas, Marshall Division. On behalf of Verizon. Case active as of 02/01/2021.

Syncloud Technologies, LLC v Adobe, Inc. CA 6:19-cv-00527-ADA (Filed Sep. 2019). Before the United States District Court for the Western District of Texas, Waco Division. On behalf of Adobe. Case active as of 02/01/2021.

Castlemorton Wireless, LLC v. Verizon Communications Inc. et. CA 6:20-cv-00035-ADA (Filed Jan. 2020). Before the United States District Court for the Western District of Texas, Waco Division. On behalf of Verizon and Charter Communications.

Confidential Arbitration case on behalf of Nokia regarding cellular devices. Case active as of 02/01/2021.

IPCom v. Verizon (Nokia). CA 2:20-cv-323 (Filed 2020.10.01.). Before the United States District Court for the Eastern District of Texas, Marshall Division. On behalf of Verizon and Nokia. Case active as of 02/01/2021.

IPCom v. AT&T (Ericsson). CA 2:20-cv-323 (Filed 2020.10.01.). Before the United States District Court for the Eastern District of Texas, Marshall Division. On behalf of AT&T and Ericsson. Case active as of 02/01.2021.

Philips v. Thales et al. ITC Investigation No. 337-TA-1240. Before the ITC. On behalf of Philips. Case active as of 02/01/2021.